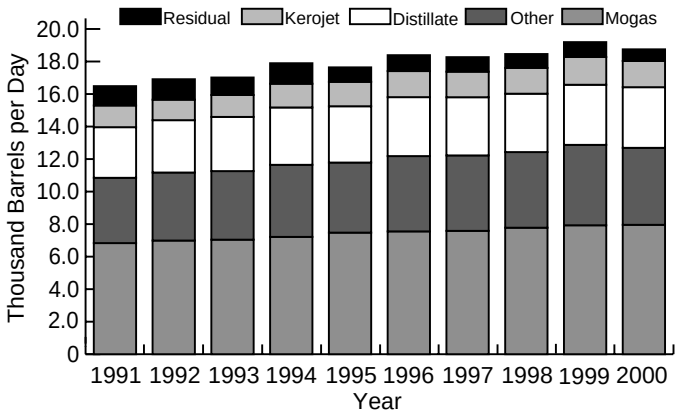
# Highlights

March ushered in warmer weather, thereby softening demand for heating fuels and bringing to an end the traditional heating season. Temperatures across the U.S., on average, were considerably warmer than normal and compared to this time last year, were 23.2 percent warmer.[1] In it's ninth year of expansion, the robust economy continues to show no signs of slowing buoyed by strong consumer spending, rising income levels, and tight labor markets.[2] With the economy steaming ahead, total demand for petroleum products reached the second highest average for the month in more than 20 years. Total demand for refined petroleum products, measured as product supplied, averaged 19.2 million barrels per day for March 2000[3] (Table H1). For the quarter, total demand for refined petroleum products averaged 18.7 million barrels per day (Figure H1).

**Figure H1. Total Demand, 1991-Current, Comparison in March for Petroleum Products**




Source: Energy Information Administration, *Petroleum Supply Annual*, DOE/EIA-0340 (various issues), and *Petroleum Supply Monthly*, DOE/EIA-0109 (various issues).

March 2000 and first quarter highlights include:

- **March record highs** for finished motor gasoline **demand** and **production** along with high retail prices at the pumps all focused attention on the relatively low, but growing, stocks of finished motor gasoline. For the year, demand is also at a record pace, averaging 8.0 million barrels per day. **Stocks** of finished motor gasoline ended the month at 157.2 million barrels their lowest level for this time of year since 1997.

- **Demand** for distillates was down slightly compared to last March at 3.7 million barrels per day. Year-to-date, demand is at the highest average since the late 1970's. Distillate fuel oil **production** set **a record for the month** at 3.5 million barrels per day. Distillate fuel oil imports, year-to-date, have been at their highest rate in a decade at 292 thousand barrels per day. However, total distillate fuel oil **stocks** ended the month 97.2 million barrels, a 46 month low.

- Residual fuel oils continue their year-to-year slide with **demand** down to an average of 673 thousand barrels per day, **production** down to 638 thousand barrels per day, and **imports** of only 171 thousand barrels per day in March. Year-to-date data also reflect historically low averages. **Stocks** ended the month at 34.8 million barrels.

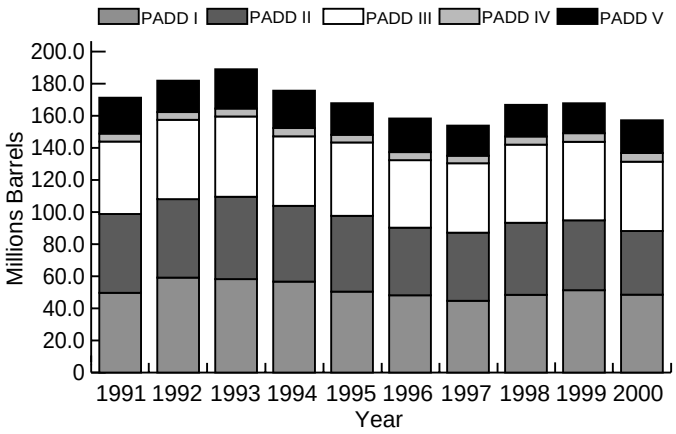
- **Demand** for kerosene-type jet fuel remains robust at 1.7 million barrels per day in March and 1.6 million barrels per day since the first of the year. **Production** of kerosene-type jet fuel set a **record high for the month** at 1.6 million barrels per day. **Imports** of total jet fuel are also strong at 108 thousand barrels per day for the month and 124 thousand barrels per day for the quarter. Kerosene-type jet fuel **stocks** ended the month at 41.9 million barrels.

- Propane **inventories** ended the month below the normal seasonal range at 21.6 million barrels. March's month-end total is the lowest for the month in over a quarter of a century.

- U.S. domestic **production** of crude oil remains low as March's average of 5.9 million barrels per day is the **lowest rate for the month in half a century**. Since the beginning of the year, domestic production has also averaged 5.9 million barrels, the lowest average for this period since 1950. Alaskan field production of crude oil averaged only 1.0 million barrels per day in March. The year-on-year decline in Alaskan field production is evident as year-to-date production is down **11.3 percent compared to this time last year**. Excluding the Strategic Petroleum Reserve (SPR), crude oil **stocks** ended the month at 294.3 million barrels representing the lowest total for the month since 1976.

- Refinery **inputs** of crude oil averaged 14.6 million barrels per day during March, about 24 thousand barrels per day below the record high for the month set in 1998.

**Figure H2. Finished Motor Gasoline, Year-to-Year March Stocks Comparisons by PAD District, 1975-2000**




Source: Energy Information Administration, *Petroleum Supply Annual*, DOE/EIA-0340 (various issues), and *Petroleum Supply Monthly*, DOE/EIA-0109 (various issues).

[1]"Heating Degree Day Data Monthly Summary, Monthly Data for March 2000", *National Oceanic and Atmospheric Administration*, accessible via the Internet at http://www.cpc.ncep.noaa.gov/.

[2]"Consumers Keep Spending Heartily in March", *Reuters*, April 13, 2000, accessible via the Internet at http://dailynews.yahoo.com/.

[3]March 2000 data are monthly-from-weekly estimates based on the Energy Information Administration's Weekly Petroleum Supply Reporting System.

## Table H1. Petroleum Supply Summary

(Million Barrels per Day, Except Where Noted)

| Category | 2000 | | | 1999 | January - March | |
|---|---|---|---|---|---|---|
| | Estimated March | February | Difference[a] | March | 2000 | 1999 |
| **Products Supplied** | 19.2 | 19.3 | -0.1 | 19.5 | 19.0 | 19.2 |
| Finished Motor Gasoline | 8.3 | 8.2 | (s) | 8.1 | 8.0 | 7.9 |
| Distillate Fuel Oil | 3.7 | 3.8 | -0.1 | 3.8 | 3.7 | 3.7 |
| Residual Fuel Oil | 0.7 | 0.8 | -0.1 | 0.9 | 0.7 | 0.9 |
| Jet Fuel | 1.7 | 1.6 | (s) | 1.7 | 1.6 | 1.7 |
| Other Petroleum Products[b] | 4.9 | 4.9 | (s) | 4.9 | 4.9 | 4.9 |
| **Crude Oil Inputs** | 14.6 | 14.0 | 0.6 | 14.5 | 14.2 | 14.5 |
| **Operating Utilization Rate (%)** | 91.2 | 87.4 | 3.8 | 91.7 | 88.5 | 92.2 |
| **Imports** | 10.6 | 10.4 | 0.2 | 10.6 | 10.2 | 10.4 |
| **Crude Oil** | 8.5 | 8.1 | 0.4 | 8.8 | 8.1 | 8.5 |
| Strategic Petroleum Reserve | 0.0 | (s) | (s) | 0.0 | (s) | 0.0 |
| Other | 8.5 | 8.1 | 0.4 | 8.8 | 8.1 | 8.5 |
| **Products** | 2.0 | 2.3 | -0.3 | 1.8 | 2.1 | 1.9 |
| Finished Motor Gasoline | 0.3 | 0.4 | -0.1 | 0.3 | 0.3 | 0.3 |
| Distillate Fuel Oil | 0.2 | 0.5 | -0.2 | 0.2 | 0.3 | 0.3 |
| Residual Fuel Oil | 0.2 | 0.2 | -0.1 | 0.3 | 0.2 | 0.2 |
| Jet Fuel | 0.1 | 0.1 | (s) | 0.1 | 0.1 | 0.1 |
| Other Petroleum Products[c] | 1.2 | 1.1 | 0.1 | 0.9 | 1.2 | 1.0 |
| **Exports** | 1.0 | 0.9 | 0.1 | 0.8 | 1.0 | 0.8 |
| Crude Oil | 0.1 | (s) | 0.1 | 0.1 | 0.1 | 0.1 |
| Products | 0.9 | 0.8 | 0.1 | 0.7 | 0.9 | 0.7 |
| **Total Net Imports** | 9.6 | 9.5 | (s) | 9.8 | 9.3 | 9.6 |
| **Stock Change[d]** | (s) | -0.3 | 0.3 | -0.6 | -0.2 | -0.4 |
| Crude Oil | 0.2 | 0.1 | 0.1 | 0.3 | 0.1 | 0.2 |
| Products | -0.2 | -0.4 | 0.3 | -0.9 | -0.3 | -0.6 |
| **Total Stocks (million barrels)** | 1,470 | 1,470 | -1 | 1,608 | — | — |
| **Crude Oil** | 864 | 858 | 6 | 908 | — | — |
| Strategic Petroleum Reserve[e] | 569 | 569 | (s) | 572 | — | — |
| Other | 294 | 289 | 6 | 336 | — | — |
| **Products** | 606 | 612 | -6 | 700 | — | — |
| Finished Motor Gasoline | 157 | 156 | 1 | 168 | — | — |
| Distillate Fuel Oil | 97 | 105 | -8 | 126 | — | — |
| Residual Fuel Oil | 35 | 34 | 1 | 40 | — | — |
| Jet Fuel | 42 | 42 | (s) | 41 | — | — |
| Other Petroleum Products[c] | 275 | 275 | (s) | 326 | — | — |

[a] Difference is equal to volume for current month minus volume for previous month.

[b] Includes crude oil product supplied, natural gas liquids, liquefied refinery gases (LRG's), other liquids, and all finished petroleum products except finished motor gasoline, distillate fuel oil, residual fuel oil, and jet fuel.

[c] Includes natural gas liquids, liquefied refinery gases (LRG's), other liquids, and all finished petroleum products except finished motor gasoline, jet fuel, distillate fuel oil, and residual fuel oil.

[d] A negative number indicates a decrease in stocks and a positive number indicates an increase.

[e] Crude oil stocks in the Strategic Petroleum Reserve include non-U.S. stocks held under foreign or commercial storage agreements.

(s) = Less than 0.05 million barrels per day, or less than 0.05 percent, or less than 0.5 million barrels.

Note: Totals may not equal sum of components due to independent rounding.

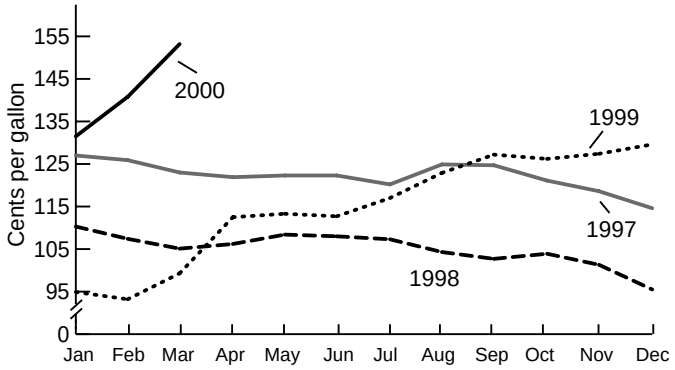
Source: Energy Information Administration (EIA), 1998,*Petroleum Supply Annual*, Volume 2; appropriate issues of the *Petroleum Supply Monthly* and the *Weekly Petroleum Status Report*.

Data for the current month are preliminary estimates, based on weekly submissions. For an explanation of estimation methodology and accuracy, see Appendix A of *Weekly Petroleum Status Report* and the article, "Accuracy of Petroleum Supply Data", published in the December 1999*, Petroleum Supply Monthly.*

# Motor Gasoline

**Demand** for finished motor gasoline set a **record high for the month** at an average of 8.3 million barrels per day. Year-to-date, demand for finished motor gasoline is also at a **record pace** of 8.0 million barrels per day. The combination of higher crude oil costs and an extraordinarily tight supply/demand balance for motor gasoline continues to affect retail prices and fuel concerns over the adequacy of supplies for the coming driving season.[4] Illustrating this tightness, consumers across the country were paying an average of $1.532 per gallon for conventional motor gasoline this month (Figure H2).[5] **Production** of finished motor gasoline set **record highs for the month and for the first quarter** at 8.2 million barrels per day and 7.8 million barrels per day, respectively. **Imports** of finished motor gasoline arrived in the states at a rate of 295 thousand barrels per day which is within the normal range for the month. Since the beginning of the year, imports have averaged 322 thousand barrels per day, 2 thousand barrels per day more than this time last year. Stubbornly low stocks of finished motor gasoline ended the month at a 10.6 million barrel deficit compared to last March (Figure H3). Despite the unusual build during the month, **stocks** of finished motor gasoline totaled only 157.2 million barrels by month's end. Other finished motor gasoline accounted for 117.3 million barrels, reformulated for 39.1 million barrels, and oxygenated for 0.7 million barrels.

**Figure H3. Retail Prices for Conventional Motor Gasoline, 1997-current**

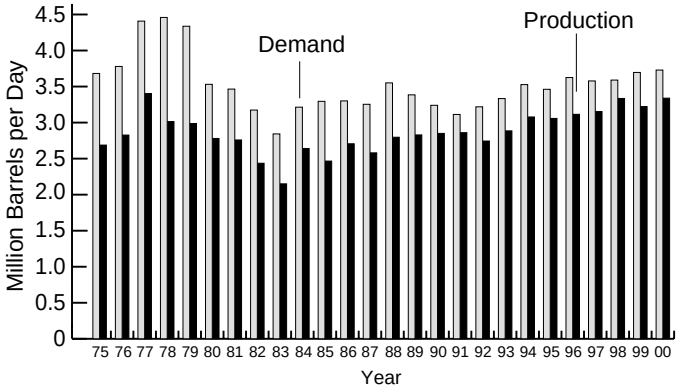



Source: Energy Information Administration, *Weekly Petroleum Status Report,* DOE/EIA-0208 (various issues).

# Distillate Fuel Oil

**Demand** for distillate fuel oil averaged 3.7 million barrels per day in March. For the year, distillate fuel oil demand has also averaged 3.7 million barrels per day, the highest average for the quarter since 1979 (Figure H4). **Production** of distillate fuel oil **set a record high for the month** at 3.5 million barrels per day. Demand for distillates for use as a transportation fuel has been bolstered by the booming economy as evident in U.S. rail traffic which is at a record pace through the first quarter and at a record high for the month.[6] Production of distillate fuel oil since the beginning of the year has averaged 3.3 million barrels per day. **Imports** were normal for the month at 231 thousand barrels per day. The year-to-date average for imports at 292 thousand barrels per day is the highest average for the quarter in a decade. Total distillate fuel oil **stocks** were drawn down to the lowest month-end total in 46 months at 97.2 million barrels. Low-sulfur distillates ended the month down 12.2 percent compared to last March at 60.6 million barrels. Stocks of high-sulfur distillate fuel oil ended the month **extremely low** at only 36.6 million barrels, down 35.5 percent compared to last March.

**Figure H4. Distillate, Year-to-Date March Comparisons, 1975-2000**



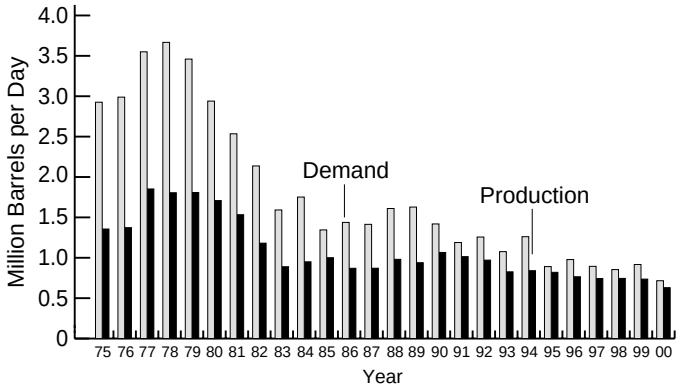

Source: Energy Information Administration, *Petroleum Supply Annual*, DOE/EIA-0340 (various issues), and *Petroleum Supply Monthly*, DOE/EIA-0109 (various issues).

# Residual Fuel Oil

Residual fuel oil's slide continues as **demand** dipped to 673 thousand barrels per day in March, **the second lowest monthly average in more than thirty-seven years**. This year, demand has averaged 728 thousand barrels per day, down 20.7 percent compared to a year ago (Figure H5). As a result of higher petroleum prices, utilities and industrial consumers with fuel switching capabilities have favored natural gas over the heavy gas oil.[7] Production of residual fuel oil is down not only for the month but year-to-date as well, as both averages dropped to their lowest respective rates in decades. **Production** in March averaged only 638 thousand barrels per day and year-to-date production of the heavy fuel oil has averaged only 645 thousand barrels per day. **Imports** of residual fuel oil in March averaged 171 thousand barrels per day, the lowest average for this time of year in more than three decades. Year-to-date, residual fuel oil imports are down to 206 thousand barrels per day. End-of-month **stocks** totaled 34.8 million barrels, down 4.8 million barrels from this time last year.

[4]"Summer 2000 Motor Gasoline Outlook", *The Energy Information Administration's Short Term Energy Outlook*, April 2000, accessible via the Internet at http://www.eia.doe.gov/emeu/steo/pub/summog as.html.
[5]"Table 16. U.S. Retail Motor Gasoline and On-Highway Diesel Fuel Prices, 1999 to Present", *Weekly Petroleum Status Report*, April 7, 2000, p. 27.
[6]"Rail Freight Traffic Up in March", *Association of American Railroads*, April 6, 2000, accessible via the Internet at http://www.aar.org/.
[7]"Power Generation, Storage Demand Drive Spot, Futures Gas Market", *The Oil Daily*, March 20, 2000, p. 6.

**Figure H5. Residual, Year-to-Date March Comparisons, 1975-2000**

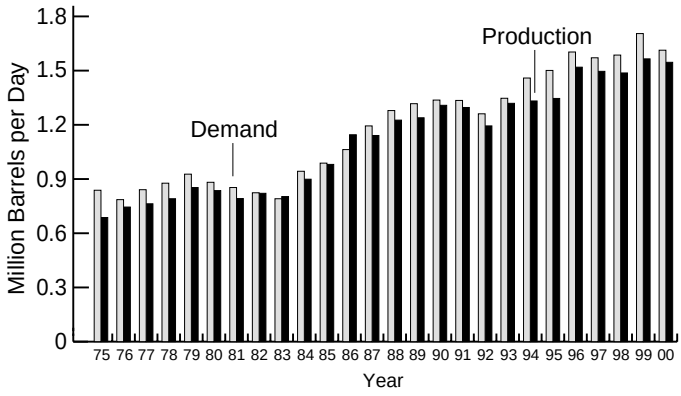



Source: Energy Information Administration, *Petroleum Supply Annual*, DOE/EIA-0340 (various issues), and *Petroleum Supply Monthly*, DOE/EIA-0109 (various issues).

# Kerosene-Type Jet Fuel

The strong growth in the commercial airline industry is reflected in the latest data on available seat miles, one measure of airline capacity, which reveals increases for both the month and year-to-date.[8] **Demand** for kerosene-type jet fuel averaged 1.7 million barrels per day, **only 48 thousand barrels per day from the record high for the month**. For the year, demand has averaged 1.6 million barrels per day, down 4.5 percent compared to last year's record pace (Figure H6). **Production** of kerosene-type jet fuel set **a record high for the month** at 1.6 million barrels per day. Kerosene-type jet fuel production since January has averaged 1.5 million barrels per day. **Imports** of total jet fuel, kerosene-and naphtha-type, were within the normal seasonal range at 108 thousand barrels per day. The January through March average for imports of total jet fuel were **up 7.7 percent** compared to this time last year at 124 thousand barrels per day. **Stocks** of kerosene-type jet fuel ended the month at 41.9 million barrels.

**Figure H6. Kerojet, Year-to-Date March Comparisons, 1975-2000**



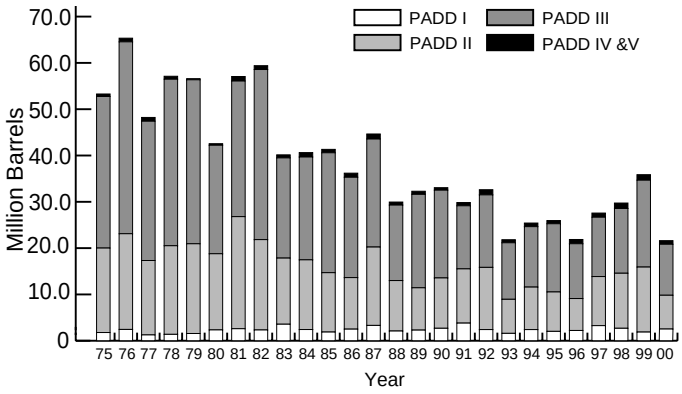

Source: Energy Information Administration, *Petroleum Supply Annual*, DOE/EIA-0340 (various issues), and *Petroleum Supply Monthly*, DOE/EIA-0109 (various issues).

# Propane

U.S. propane inventories declined to a total of 21.6 million barrels by month's end. This left inventories at the traditional start of the April through September build season at their lowest level in a quarter of a century (Figure H7). Inventories along the Gulf Coast declined 2.1 million barrels. In the Midwest, inventories gained 633 thousand barrels and the East Coast added another 519 thousand barrels. Both East Coast and Gulf Coast stocks were within their normal seasonal ranges while Midwest inventories ended the month below normal. Gulf Coast propane inventories ended the month at 11.0 million barrels and Midwest stocks totaled 7.2 million barrels. Inventories along the East Coast totaled 2.5 million barrels by month's end.

As previously noted, the end of March signals the traditional start of the April through September build season. The typical stock build during the past five years averaged about 33 million barrels. Assuming that inventories build at this average rate, total U.S. inventories would end up at 55 million barrels by the end of September 2000 which is below normal.

**Figure H7. Propane Stocks, Year-to-Year March Comparisons, 1975-2000**




Source: Energy Information Administration, *Petroleum Supply Annual*, DOE/EIA-0340 (various issues), and *Petroleum Supply Monthly*, DOE/EIA-0109 (various issues).

# Crude Oil

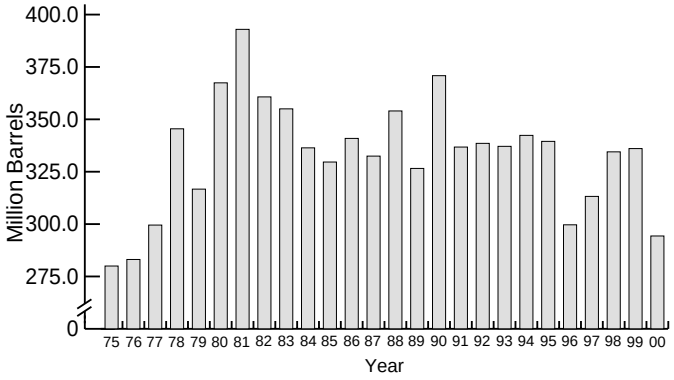
Domestic **production** of crude oil was down 3.0 percent compared to last March at 5.9 million barrels per day. **This is the lowest average for the month in half a century**. Domestic production of crude oil for the quarter was down, as well, to it's lowest average since 1950 at an average of 5.9 million barrels per day. Warmer weather and natural field declines resulted in lower production this month in Alaska.[9] Alaskan field production for the month averaged only 1.0 million barrels per day. Continuing it's downward trend, Alaskan production through March has averaged only 1.0 million barrels per day, a decrease of 10.2 percent. **Imports** of crude oil entered the U.S. at 8.5 million barrels per day, **a 2.7 percent decline compared to last March's record for the month**. Reflective of the higher crude oil prices and lower refinery runs, imports, year-to-date, are at their lowest average for

[8]"Preliminary Scheduled Passenger Traffic Statistics", *Air Transport Association*, April 12, 2000, accessible via the Internet at http://www.air-transport.org/.
[9]"ANS Output Falls for March", *The Oil Daily*, April 5, 2000, p. 6.

the period since 1997 at 8.1 million barrels per day. Net imports of crude oil averaged 8.4 million barrels per day, down 248 thousand barrels per day from the March, 1999 record high. So far this year, net imports of crude oil have averaged 8.0 million barrels per day.

Crude oil **stocks**, excluding the SPR, remain tight, ending the month at 294.3 million barrels. Compared to this time last year, non-SPR stocks are down 41.7 million barrels or at **the lowest level for the month since 1976** (Figure H8). Total crude oil stocks ended the month at 863.7 million barrels, the lowest month-end total for March since 1987.

**Figure H8. Year-to-Year March Crude Oil Stock Comparisons, 1975-2000**

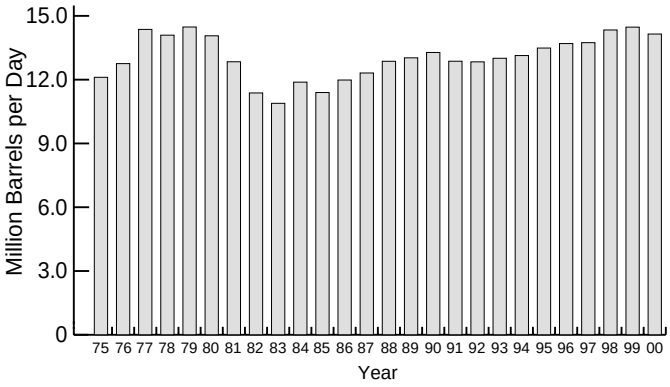



Source: Energy Information Administration, *Petroleum Supply Annual*, DOE/EIA-0340 (various issues), and *Petroleum Supply Monthly*, DOE/EIA-0109 (various issues).

# Refinery Operations

Refinery **inputs** of crude oil averaged 14.6 million barrels per day, only a few thousand barrels per day below the March record set in 1998. Since the beginning of the year, refinery crude oil inputs are **down 2.2 percent compared to 1999's first quarter**, at an average of 14.2 million barrels per day (Figure H9). The estimated refinery **operable utilization rate** (gross input divided by operable capacity), averaged 90.3 percent of capacity compared to 94.7 percent a year ago. Independent refineries were reportedly running all out while the super majors exercised restraint, banking on a drop in crude oil prices which would lower their costs rather than taking advantage of strong margins.[10]

**Figure H9. Year-to-Date March Comparisons for Crude Oil Inputs, 1975-2000**




Source: Energy Information Administration, *Petroleum Supply Annual*, DOE/EIA-0340 (various issues), and *Petroleum Supply Monthly*, DOE/EIA-0109 (various issues).

[10]"Marketview – Inconspicuous Consumption", *Petroleum Intelligence Weekly*, March 27, 2000, p. 8.